

CLAIMS (revised)

8. Shoes with compressible, elastic sole and/or heel, manufactured or otherwise made available to a plurality of athletes, each with different shoe size and body weight, where
- (a) said shoes are constructed such that a range of shoes are available within each shoe size, each with a different Hooke's spring constant of the sole/heel,
- (b) individual shoes out of said range of shoes, can be fitted to said plurality of athletes, so as to rebound following downward foot motion, at a moment substantially coinciding with subsequent upward movement of said feet,
- (c) individual shoes out of said range of shoes, can be fitted to said plurality of athletes, so as to provide the same period of oscillation when used by different individual athletes,
- (d) the harmonic motion of said shoes, when loaded by the weight of said individual athletes, synchronizes in frequency and/or phase with such foot movements as required by each of said individuals for a particular athletic activity,

whereby said shoes facilitate the lifting of the feet of said plurality of athletes away from ground, assist leg movement during ambulation and athletic activity, and provide maximal recovery of energy of stride for each athlete out of said plurality of athletes, regardless of shoe size, body weight, and type of sport engaged in.

9. The shoes of Claim 8 where, the spring constant of each pair of said shoes is designated e.g. "Very Soft... Soft... Intermediate... Stiff... Very Stiff", or "100..200..300..400..500", or "100 lb... 125 lb.... 150 lb... 175 lb", or "walking.. jogging.. speed running.. jumping.. vaulting", or through use of any other marking system, whether meaningful or arbitrary, corresponding with said differences in Hooke's spring constant of said shoes, whereby facilitating fitting to each of said individual athletes of the shoe most likely to produce said synchronization of shoe with stride for said plurality of athletes.

10. The shoes of claim 8, selected or fitted based on a plurality of the following variables:

- (a) the type of said athletic activity,
- (b) the body weight of said individual,
- (c) the pressure exerted by said individual's said down-step,
- (d) the rate of movement of said individual's leg during said up-step,
- (e) the frequency per second of the up-and-down movements of said individual's legs

whereby said shoes are selected for a plurality of athletic activities of said plurality of athletes, regardless of the value of said variables, providing maximal storage of the energy of the down-step during each athletic activity of each of said individual athletes, and release of said energy substantially at the moment of said up-step for each said individual.

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